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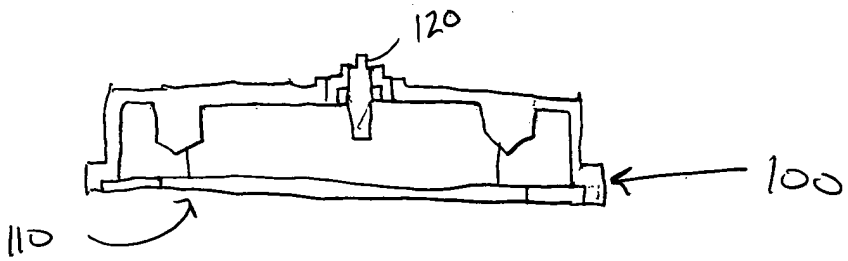
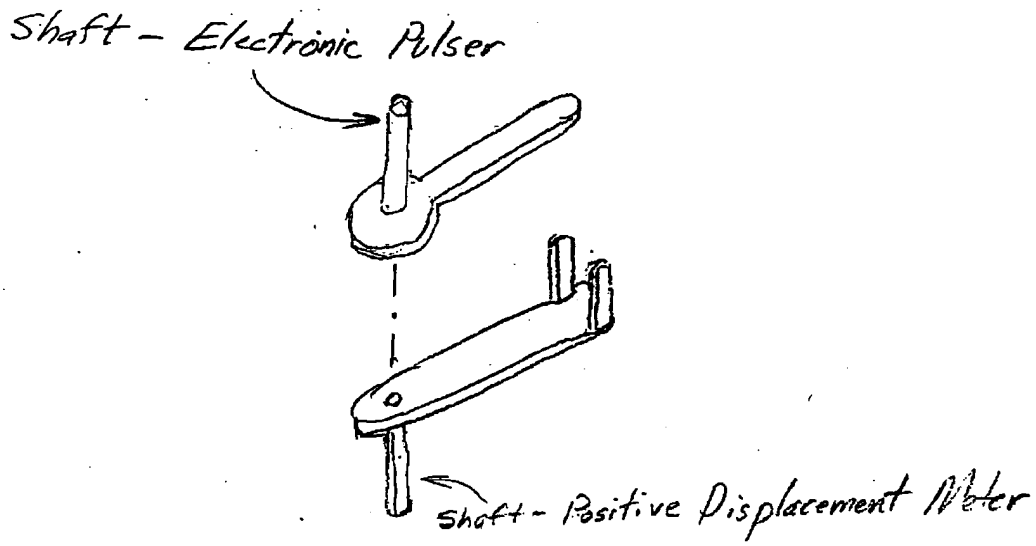


Figure 1A



Coupling Between Electric Pulser and Positive Displacement Meter

Figure 1B

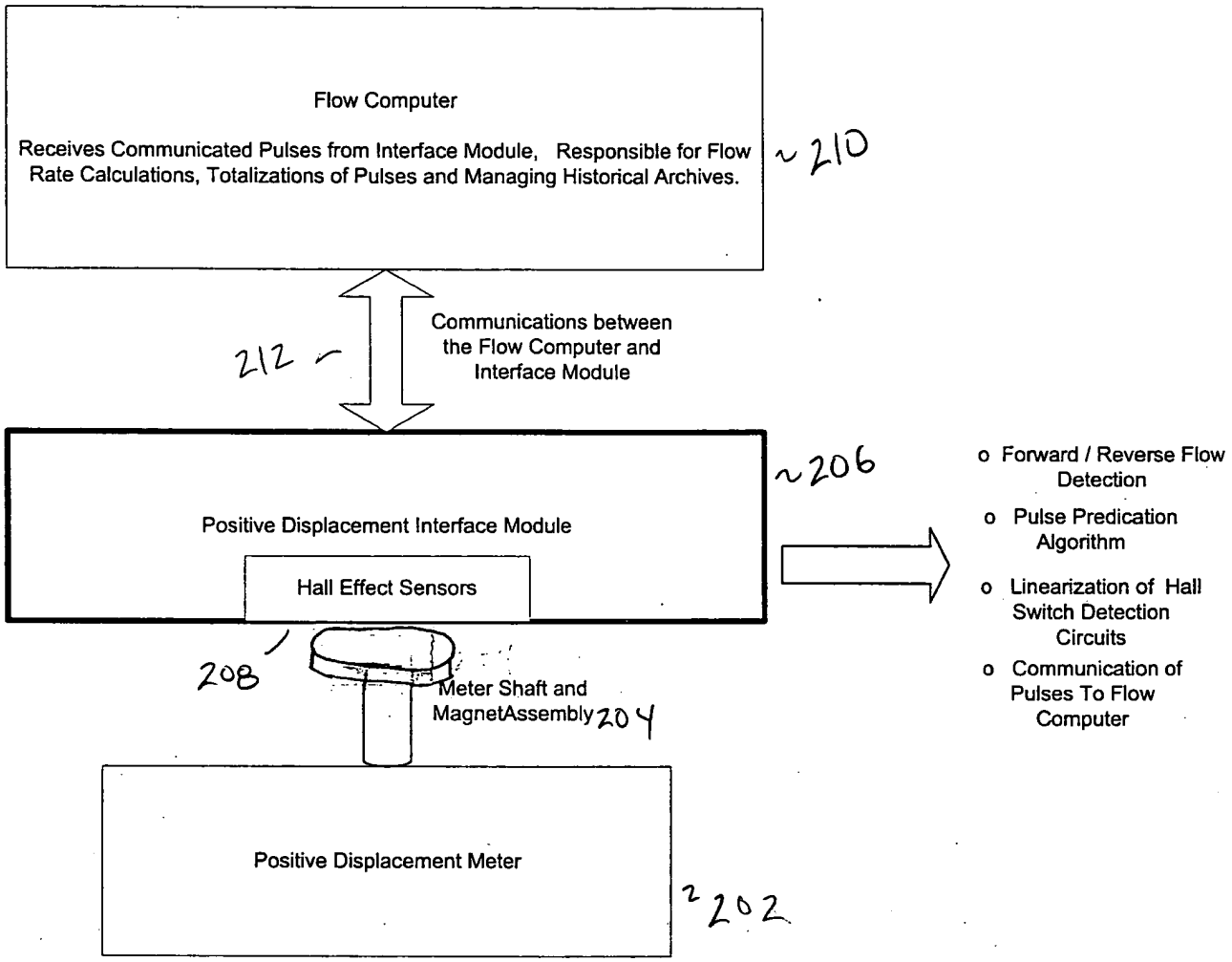

Flow Computer
Receives Communicated Pulses from Interface Module, Responsible for Flow Rate Calculations, Totalizations of Pulses and Managing Historical Archives.
~210
212
Communications between the Flow Computer and Interface Module
Positive Displacement Interface Module
~206
Hall Effect Sensors
o Forward / Reverse Flow Detection
o Pulse Predication Algorithm
o Linearization of Hall Switch Detection Circuits
o Communication of Pulses To Flow Computer
208
Meter Shaft and MagnetAssembly 204
Positive Displacement Meter
202

Figure 2

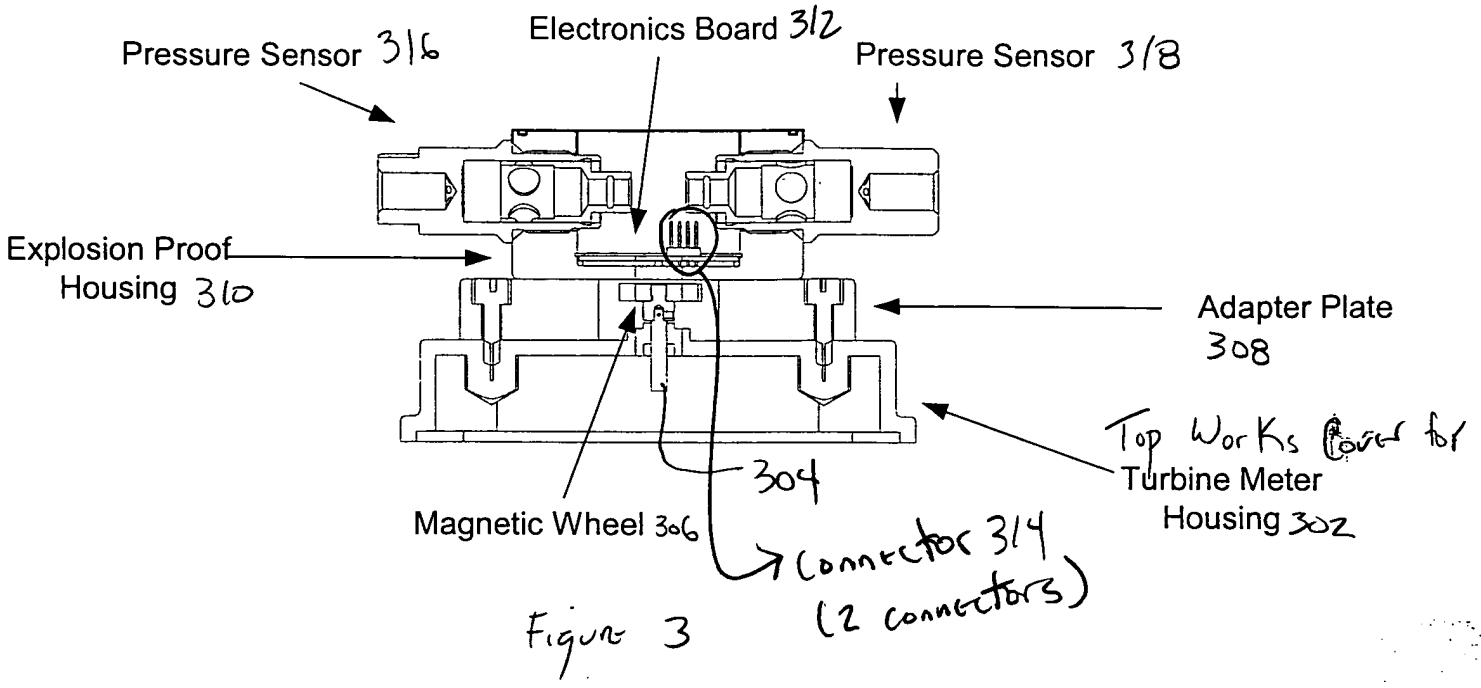


Figure 3

3D View

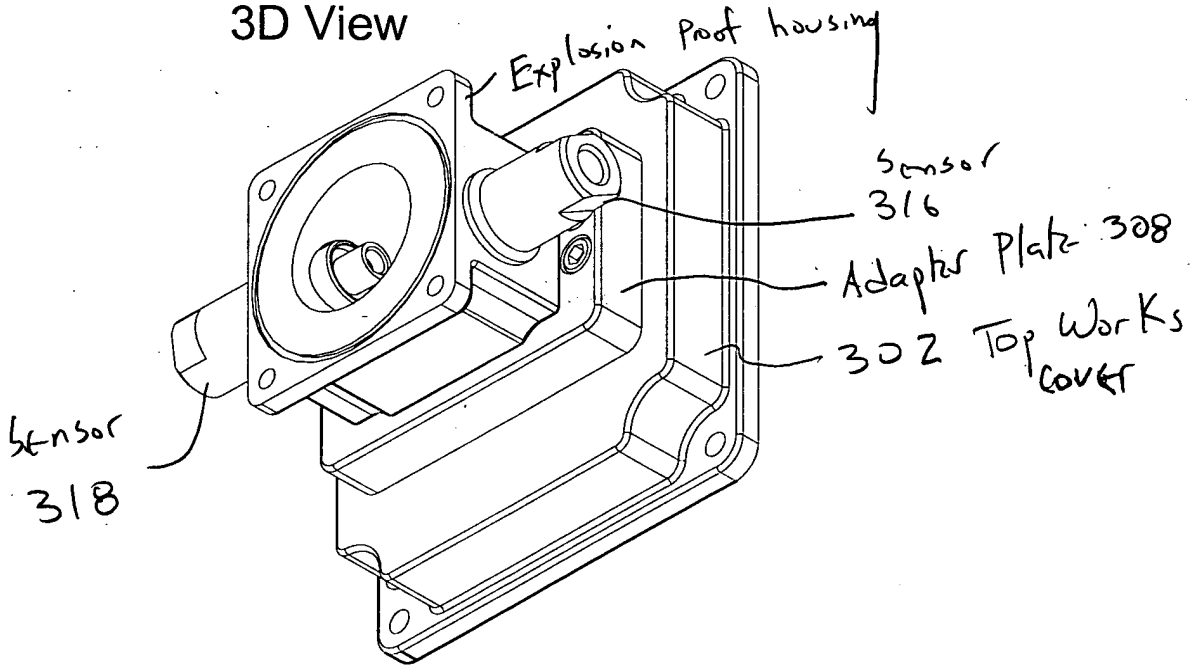


Figure 4

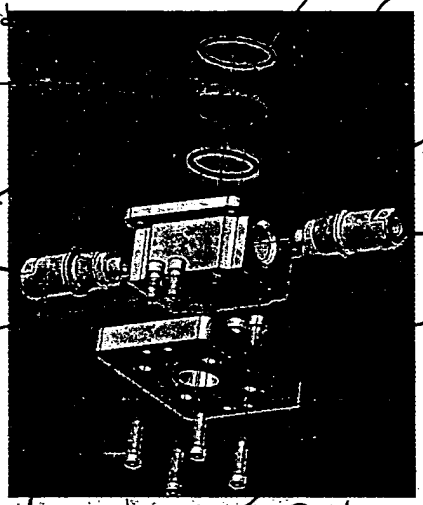


Figure 5

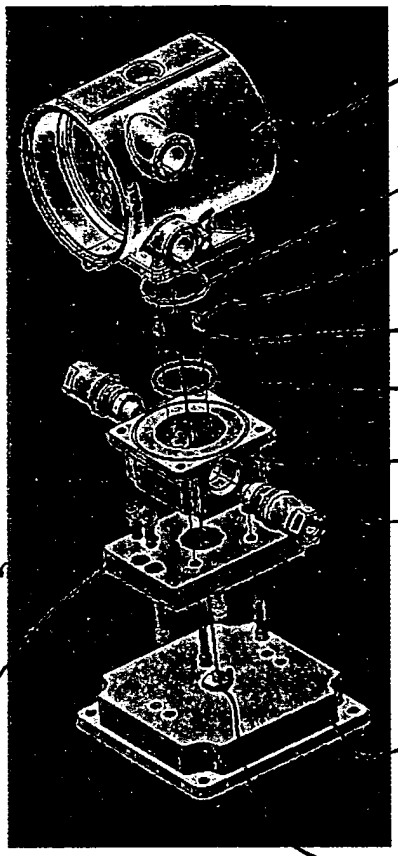
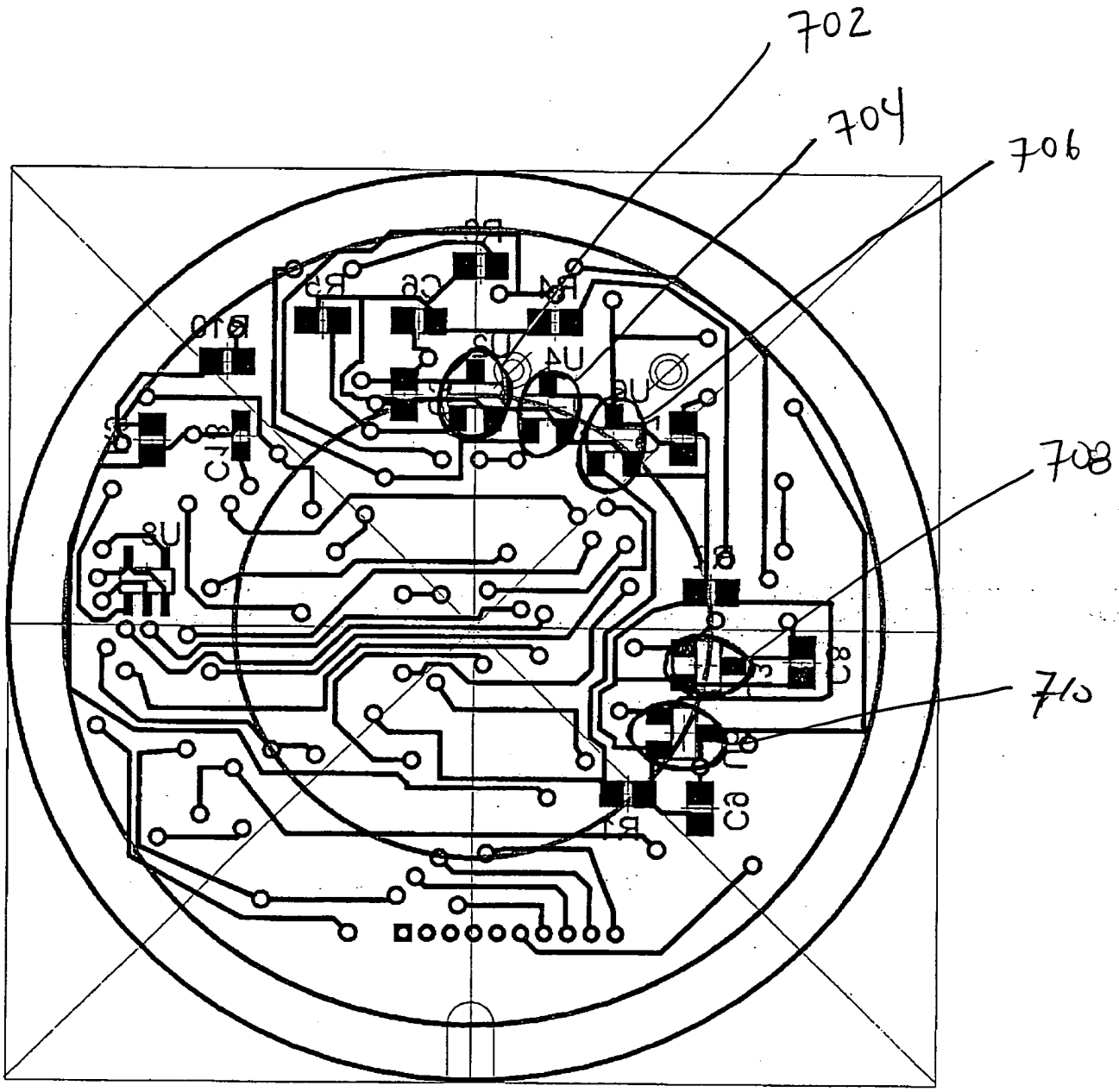
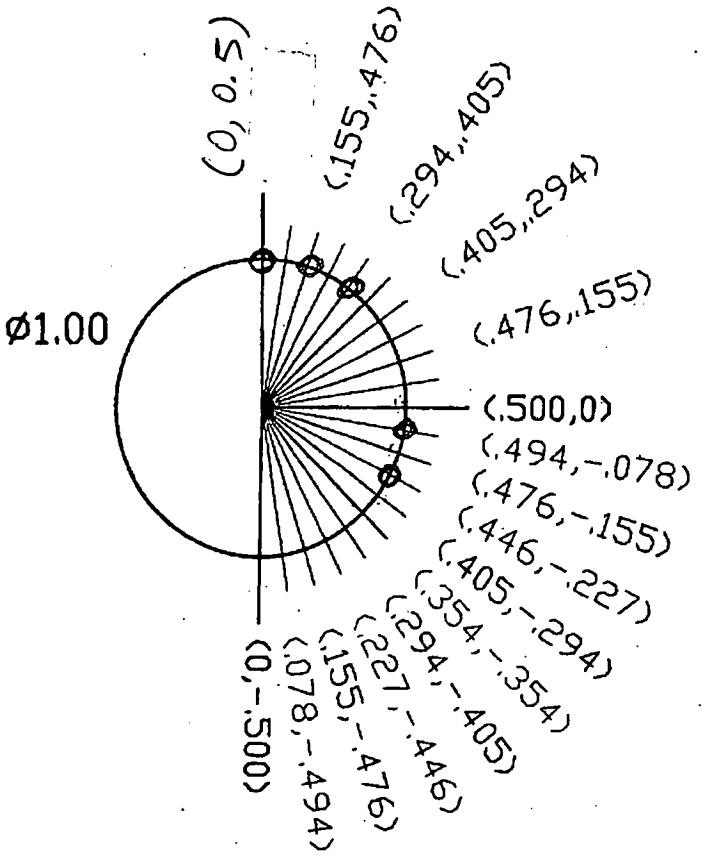


Figure 6



O - Hall Effect Sensors

Figure 7



O — Hall Effect Sensor Locations

Figure 8A

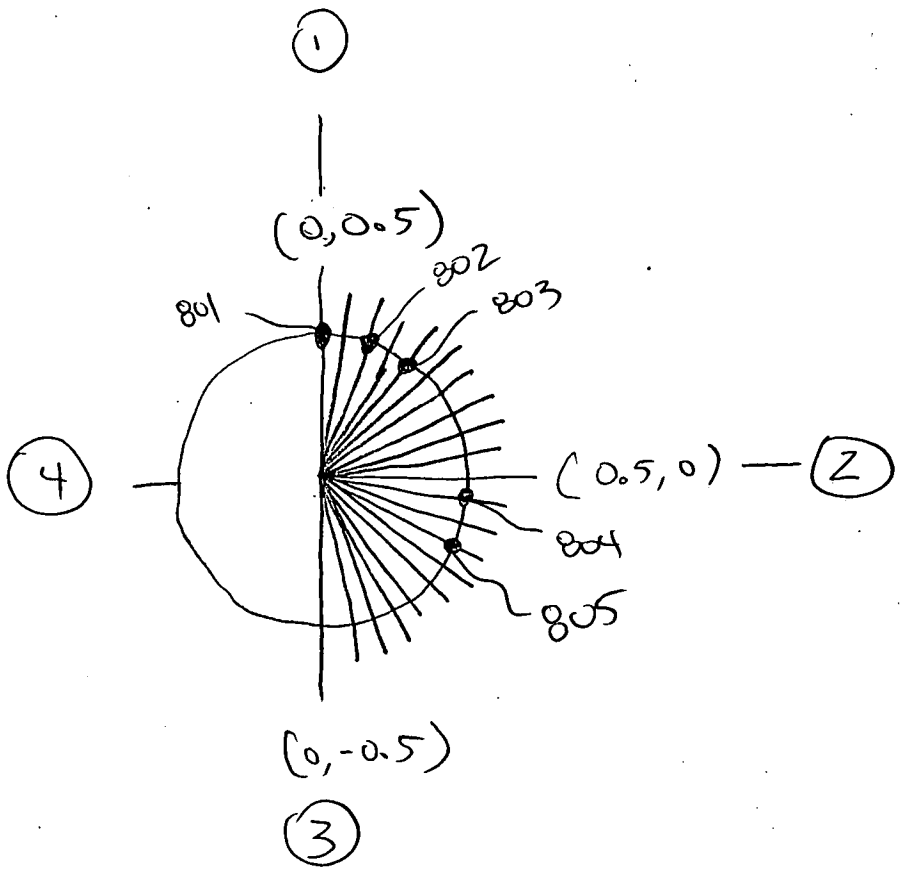


Figure 8B

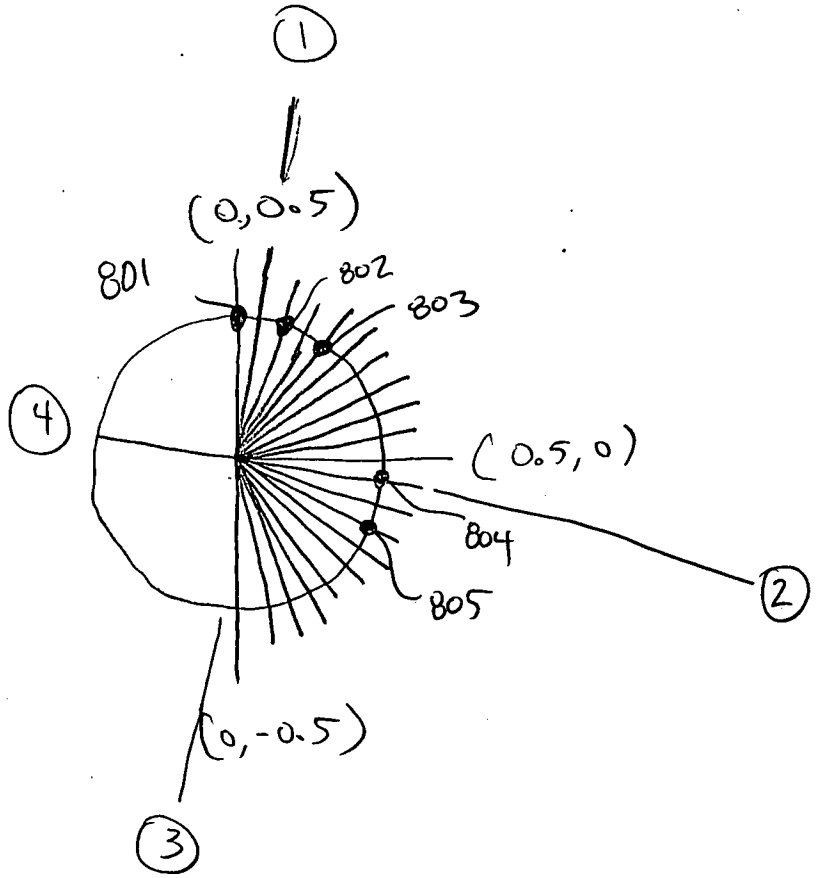


Figure 8C

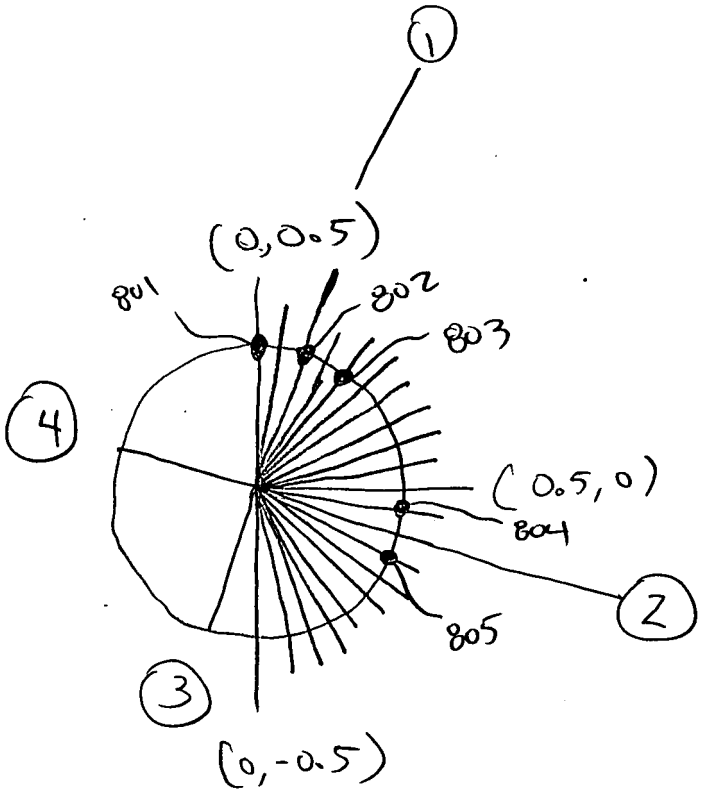


Figure 8D

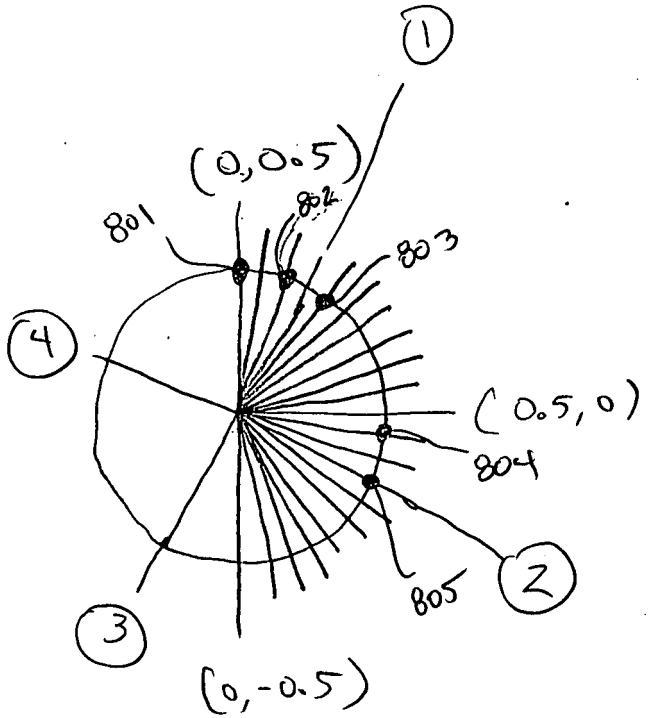


Figure 8E

314
516
906
314
A/D converter
(extra pad on
version 2 &
original)
Package

Figure 9

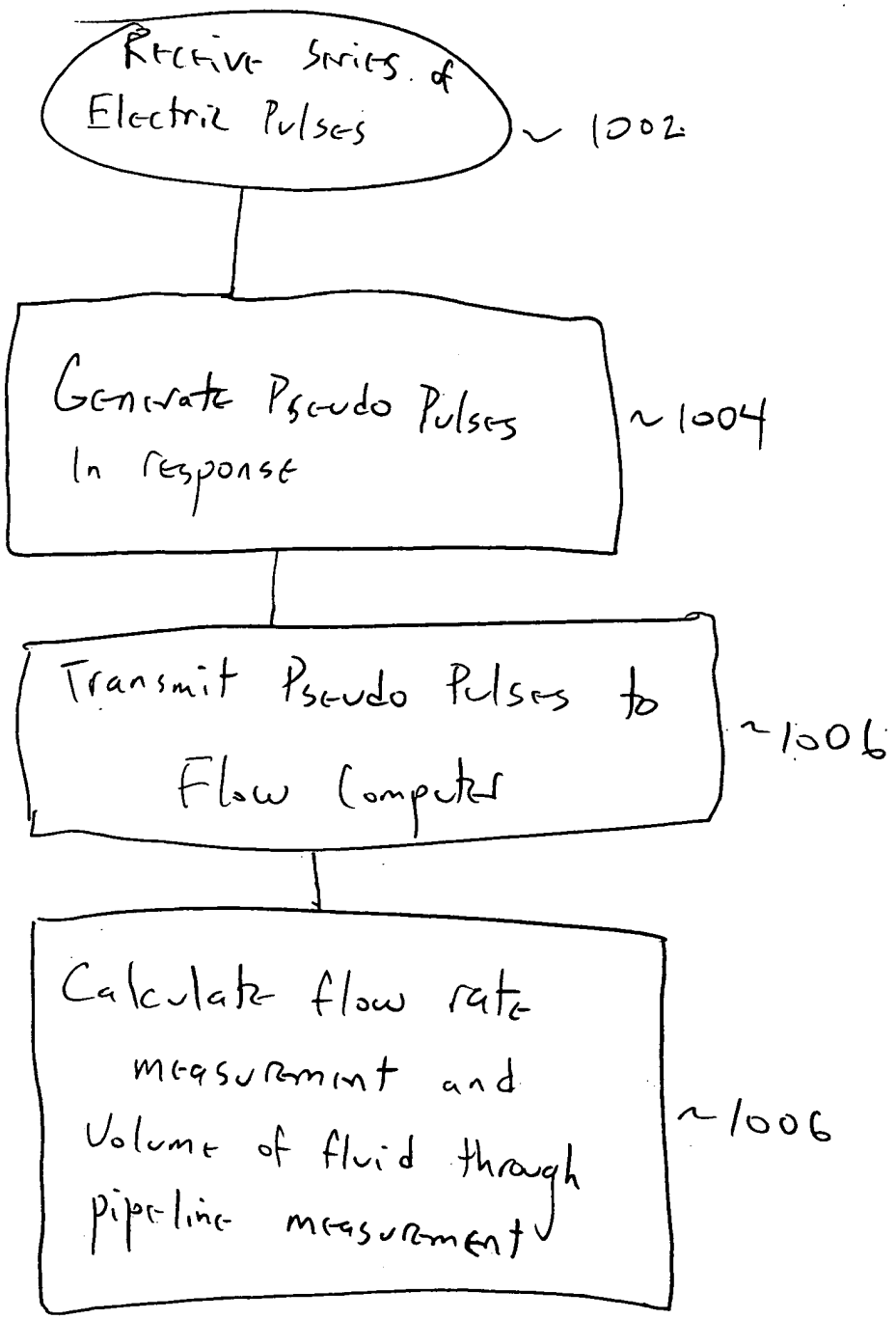

Receive Series of Electric Pulses
1002
Generate Pseudo Pulses In response
1004
Transmit Pseudo Pulses to Flow Computer
1006
Calculate flow rate measurment and Volume of fluid through pipeline measurment
1006

Figure 10